

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A processor system comprising:
a fixed processing unit having a predetermined information processing function;
a variable processing unit having a variable information processing function; and
a control unit which controls so as to cause the fixed processing unit to process a provided task, or so as to cause the variable processing unit to process the task after newly setting an information processing function of the variable processing unit;
a plurality of co-processors having the fixed processing unit, the variable processing unit and the control unit;
a main processor which preferentially processes the task; and
an arbitrating unit which analyzes the task, and allocates the task to said plurality of co-processors in accordance with a result of the analysis,
wherein the fixed processing unit and the variable processing unit are provided as a plurality of sets in accordance with a plurality of image signals, and respectively process said plurality of image signals in parallel, and
wherein the arbitrating unit analyzes the task, and in accordance with a result of the analysis, determines whether the task is allocated to only the main processor or the task is allocated to the main processor and said plurality of co-processors.
2. (Original) The processor system according to claim 1, wherein the control unit analyzes the provided task, and controls so as to cause the variable processing unit to process the task after newly setting an information processing function of the variable processing unit in accordance with a result of the analysis.
3. (Original) The processor system according to claim 1, wherein the variable processing unit has at least one of an ALU, a MAC, a LUT, and a FIFO, and realizes a new information processing function in accordance with connection information provided from the control unit.
4. (Canceled).

5. (Canceled).

6. (Canceled).

7. (Currently Amended) The processor system according to claim ~~[[5]]~~ 1, wherein the arbitrating unit calculates a processing time in a case of analyzing and processing the task by only the main processor, and on the basis of the calculated time, determines whether or not the task is processed by only the main processor.

8. (Original) The processor system according to claim 1, wherein the variable processing unit has a function of carrying out filtering processing on image information to be provided.

9. (Original) The processor system according to claim 1, wherein the variable processing unit has a function of carrying out identification processing on image information to be provided.

10. (Original) The processor system according to claim 1, wherein the variable processing unit has a function of carrying out color conversion processing on image information to be provided.

11. (Currently Amended) A processing method of a processor system, comprising:
determining on causing at least one of a fixed processing unit and a variable processing unit to process with respect to a processor system which has the fixed processing unit having a predetermined information processing function, and the variable processing unit having a variable information processing function; ~~and~~

controlling so as to cause the fixed processing unit to process a provided task, or so as to process the task after newly setting an information processing function of the variable processing unit,

analyzing, by an arbitrating unit, the task; and

allocating the task to said plurality of co-processors in accordance with a result of the analysis;

wherein a plurality of co-processors have the fixed processing unit, the variable processing unit and a control unit;

wherein a main processor preferentially processes the task,

wherein the fixed processing unit and the variable processing unit are provided as a plurality of sets in accordance with a plurality of image signals, and respectively process said plurality of image signals in parallel, and

wherein the arbitrating unit analyzes the task, and in accordance with a result of the analysis, determines whether the task is allocated to only the main processor or the task is allocated to the main processor and said plurality of co-processors.

12. (New) The processor system according to claim 1, wherein the arbitrating unit comprises:

a direct memory access unit;

a program analyzer that receives a processing program;

a memory connected to the program analyzer;

an operating program storage unit that stores an operating program therein;

a setting register that stores register information corresponding to connection information;

a data/address control unit that transmits and receives data and addresses;

an interruption control unit that receives an respective interruption signal corresponding to an operating state of each of the plurality of co-processors; and

a main processor/co-processor control unit that receives the respective interruption signal from the interruption control unit and determines which of the plurality of co-processors are currently capable of executing the task,

wherein the arbitrating unit carries out allocation of the task in accordance with a processing function or a processor speed and the determination of the main processor/co-processor control unit.